

REMARKS

Claims 1-22 and 24-27 are currently pending in the application. By this amendment, claims 1, 3, 10, 11, 14, 17, 18 and 22 are amended for the Examiner's consideration. The above amendments do not add new matter to the application and are fully supported by the specification. For example, support for the amendments is provided in Figure 1 and the specification. Reconsideration of the rejected claims in view of the above amendments and the following remarks is respectfully requested.

Present Amendment is proper for entry

Applicant respectfully submits that the instant amendment is proper for entry after final rejection. Applicant notes that no question of new matter is presented nor are any new issues raised in entering the instant amendment of the claims and that no new search would be required. Moreover, Applicant submits that the instant amendment places the application in condition for allowance, or at least in better form for appeal. Accordingly, Applicant requests the Examiner to enter the instant amendment, consider the merits of the same, and indicate the allowability of the present application and each of the pending claims.

35 U.S.C. §102 Rejection

Claims 1-11, 14-16, 18-22, 24, 25 and 26 were rejected under 35 U.S.C. §102(e) for being anticipated by U. S. Patent No. 6,189,702 issued to Bonnet ("BONNET"). This rejection is respectfully traversed.

Independent Claim 1 and Dependent Claims 2-7, 9, 24 and 26

Applicant respectively submits that BONNET does not disclose or suggest the combination of features recited in at least amended claim 1.

Claim 1 recites, *inter alia*:

a frame adapted for use with an existing conveyor system for transporting an item in an original direction, said frame including a frame entrance and a plurality of frame exits;
at least one of the frame exits being perpendicular to the frame entrance.

Applicant does not dispute that the frame of the sorting device 10 shown in Fig. 1 of BONNET has an entrance and an exit. However, because the disclosed frame in BONNET only has two main openings defined by the two posts 30 supporting the carriage 40, i.e., one defining a frame entrance and one defining a frame exit, such a device cannot be said to disclose or suggest a frame that includes a frame entrance and a plurality of frame exits such that at least one of the frame exits is perpendicular to the frame entrance. Applicant notes, in particular, that the bins 13 and 16 arranged beneath the frame of the sorting device 10 are not properly characterized as frame exits because they are not exits specifically defined by the frame, i.e., only one frame exit is specifically defined by the disclosed two-post frame. The invention, in contrast, (as shows in, e.g. Fig. 1 of the instant application) uses a plurality of legs or posts of the frame to define the plurality of frame exits 106a, 106b, and 106c.

Applicant emphasizes that the defined entrance and exits of the frame recited in claim 1 enables the present invention to achieve benefits that cannot be achieved using the two vertical columns 30 disclosed in BONNET such as allowing the frame to be a modular unit which can be used with existing conveyor systems.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of claim 1. Applicant further submits that each of claims 2-7, 9, 24 and 26 is allowable at least for depending from claim 1, as well as for additional reasons related to their own recitations.

Independent Claim 8

Applicant also disagrees that BONNET discloses or suggests "an over current sensor for determining whether a current associated with an actuator exceeds a threshold limit", as recited in claim 8.

While the Examiner has identified col. 11, lines 37-67, col. 12, lines 1-47, and col. 16, lines 26-65 as disclosing the recited overcurrent sensor, it is clear from a fair reading of cited language that the Examiner is not correct.

It is true that the cited language discloses that the arrangement in BONNET uses belt encoders 210 and a control to control a motor 42 that drives the carriage 40 of the sorting device (see col. 11, lines 50-56). However, such language is hardly suggestive of an overcurrent sensor. It is also true that the cited language discloses that "the current count of the encoder 210 is obtained" (see col. 12, lines 9-10). However, the term current in this language does not relate to electrical current and instead refers to the outputs from a counter that is typically used with an encoder. Finally, while it is true that the cited language discloses that "the conveyor may be stopped" when "the PLC receive[s] a signal revealing the first paddle 260a was not in ready position S1" (see col. 16, lines 51-55), such language is also not suggestive of an overcurrent sensor.

Thus, it is clear that contrary to the Examiner's assertions, BONNET does not disclose or suggest an "over current sensor", let alone an "over current sensor for determining whether a current associated with an actuator exceeds a threshold limit".

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of claim 8.

Independent Claim 10

BONNET also fails to disclose or suggest the combination of features in claim 10.

Amended claim 10 recites, inter alia:

a plurality of sensors associated with the modular frame for detecting a flow of the items entering an entrance of the modular frame and exiting an exit of the modular frame.

As explained above, Applicant does not dispute that the frame of the sorting device 10 shown in Fig. 1 of BONNET has an entrance. Nor does Applicant dispute that the disclosed arrangement of BONNET uses sensors. Applicant acknowledges, for example, that the disclosed system uses a photocell 202 arranged upstream of the entrance of the sorting device 10 (see Fig. 3) "to provide a signal indicating a parcel P is entering the sorting device" and that "the paddle 100 is activated ... at a time calculated to intersect the parcel" (see col. 10, line 56 to col. 11, line 22). An optical reader 204 is also utilized to read information from the parcel before it arrives at the sorting device 10 (see col. 11, lines 24-27). However, it is clear from the figures and the specification that these sensors do not detect a flow of items entering an entrance of the modular frame and exiting an exit of the modular frame. To the contrary, Figs. 1 and 3 show sensors 202 located only at entrances of the sorting devices 10.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of claim 10.

Independent Claim 11

Applicant also submits that BONNET does not disclose or suggest momentary contacts associated with a control box arranged on the frame which provide an input signal to control the movement of the moveable diverting mechanism, as recited in claim 11.

While the Examiner has identified reference numbers 204, 210, and 212 of BONNET as the recited "momentary contacts", it is clear from the language of BONNET that this assertion is unsupported by a fair reading of BONNET. Applicant notes that col. 11, lines 24-27 and Fig. 1 of BONNET disclosed the sensor 204 as merely an "optical reader" mounted to a frame that is spaced from the frame of the sorting device 10. The sensor 204 is clearly not a momentary contact associated with a control box arranged on the frame of the sorting device 10. Furthermore, col. 11, lines 49-56 describes devices 210 as encoders which "are positioned to measure the displacement of each conveyor" and not momentary contacts associated with a control box arranged on the frame of the sorting device 10. Finally, it is clear from this latter language that the disclosed device 212 is merely a "keyboard" and not a momentary contact associated with a control box arranged on the frame of the sorting device 10.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of claim 11.

Independent Claim 14 and Dependent Claims 15 and 16

Applicant also submits that BONNET does not disclose or suggest the combination of features recited in at least claim 14, and in particular, a frame having first, second, third, and fourth frame members each connected to a fifth frame member, the first and second frame members defining an entrance, the second and third frame members defining a first of a plurality of exits, the third and fourth frame members defining a second of the plurality of exits, and the fourth and first frame members defining a third of the plurality of exits, and a gliding mechanism extending across the fifth frame member of the frame and adapted to move between opposing exits of the plurality of exits.

As explained above, Applicant does not dispute that the frame of the sorting device 10 shown in Fig. 1 of BONNET has an entrance and a plurality of what could arguably be called exits. However, it is clear from Fig. 1 that the frame in BONNET only has two main openings defined by the two posts 30 supporting the carriage 40, i.e., one defining a frame entrance and one defining a frame exit. Accordingly, it is apparent that such a device cannot be said to disclose or suggest a frame that includes first, second, third, and fourth frame members each connected to a fifth frame member, the first and second frame members defining an entrance, the second and third frame members defining a first of a plurality of exits, the third and fourth frame members defining a second of the plurality of exits, and the fourth and first frame members defining a third of the plurality of exits, and a gliding mechanism extending across the fifth frame member of the frame and adapted to move between opposing exits of the plurality of exits.

Applicant notes, in particular, that the bins 13 and 16 arranged beneath the frame of the sorting device 10 are not properly characterized as frame exits because they are not exits specifically defined by the frame, i.e., only one frame exit is specifically defined by the disclosed two-post frame. The invention, in contrast, (as shows in, e.g. Fig. 1 of the instant application) uses a plurality of legs or posts of the frame to define the plurality of frame exits 106a, 106b, and 106c.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of claim 14. Applicant further submits that claims 15 and 16 are allowable at least for depending, directly or indirectly, from an allowable claim 14.

Independent Claim 18 and Dependent Claims 19-21

Applicant also respectfully submits that BONNET does not disclose or suggest allowing the blade to move within a frame having a plurality of vertical frame members which define a frame entrance and at least first and second frame exits which are arranged orthogonal to one another, as recited in claim 18.

Again, as noted above, Applicant does not dispute that the frame of the sorting device 10 shown in Fig. 1 of BONNET has a frame entrance and a frame exit, i.e., it is clear from Fig. 1 that the frame in BONNET only has two main openings defined by the two posts 30 supporting the carriage 40, i.e., one defining a frame entrance and one defining a frame exit. However, it is apparent that such a device cannot be said to disclose or suggest a frame having a plurality of vertical frame members which define a frame entrance and at least first and second frame exits which are arranged orthogonal to one another. Applicant notes, in particular, that the bins 13 and 16 arranged beneath

the frame of the sorting device 10 are not properly characterized as frame exits because they are not exits specifically defined by the frame, i.e., only one frame exit is specifically defined by the disclosed two-post frame – the one on the other side of the entrance which is arranged in line with or parallel to the entrance. The invention, in contrast, (as shows in, e.g. Fig. 1 of the instant application) uses a plurality of legs or posts of the frame to define the plurality of orthogonally arranged frame exits 106a, 106b, and 106c.

Furthermore, BONNET does not disclose “controlling the diverting mechanism in accordance with the diverting direction to divert an item in either the first frame exit or the second frame exit”. Rather, as noted above, BONNET discloses only a single exit between the two vertical columns 30.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of claim 18. Applicant further submits that claims 19-21 are allowable at least for depending, directly or indirectly, from an allowable independent claim 18, as well as for additional reasons related to their own recitations.

Independent Claim 22

Applicant further also submits that BONNET does not disclose or suggest the combination of features of claim 22, and in particular, suspending the movement of the diverting mechanism based on at least one of a detection of an item being jammed, a detection of an item exceeding a threshold physical characteristic limit, a detection that the diverting mechanism exceeds a travel limit, and a detection that an operator has open access to the diverting mechanism.

Applicant does not dispute that BONNET discloses the use of sensors. Indeed, Applicant acknowledges that BONNET discloses the use of readers 204 and sensors 202 which detect a parcel entering the sorting device 10 (see col. 11, lines 19-27). However, such sensors are not disclosed as suspending the movement of the diverting mechanism based on at least one of a detection of an item being jammed, a detection of an item exceeding a threshold physical characteristic limit, a detection that the diverting mechanism exceeds a travel limit, and a detection that an operator has open access to the diverting mechanism. To the contrary, sensor 204 merely reads information from the parcel (see col. 11, lines 24-27) and sensor 202 merely provides a signal when a parcel is detected at the entrance of the sorting device 10 (see col. 11, lines 19-22).

Furthermore BONNET does not disclose or suggest any reason for suspending movement of the paddle 100 related to the above-recited conditions. The language in BONNET which even arguably relates to stopping the blade under some circumstances is located at col. 16, lines 53-55 and merely states "when the PLC receive[s] a signal revealing the first paddle 260a was not in ready position S1, the conveyor may be stopped at that time." Clearly, such language does not disclose or suggest suspending the movement of the diverting mechanism based on at least one of a detection of an item being jammed, a detection of an item exceeding a threshold physical characteristic limit, a detection that the diverting mechanism exceeds a travel limit, and a detection that an operator has open access to the diverting mechanism.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of claim 22.

In view of the herein-contained amendments and remarks, Applicant respectfully requests that the rejection of claims 1-11, 14-16, 18-22, 24, 25 and 26 under 35 U.S.C. §102 be withdrawn.

35 U.S.C. §103 Rejections

Claims 12 and 17

Claims 12 and 17 were rejected under 35 U.S.C. §103(a) for being unpatentable over BONNET in view of U. S. Patent No. 3,246,733 issued to Torbet, et al. ("TORBET"). This rejection is respectfully traversed.

While acknowledging that Bonnet fails to disclose the recited hoods, the Examiner nevertheless asserts that TORBET discloses the use of hoods and that it would have been obvious to modify the arrangement of BONNET to utilize the safety hoods 26 shown in TORBET. Applicant respectfully disagrees.

Claim 12 specifically recites hoods having openings and being positioned at an entrance of each exit of the frame. Moreover, claim 17 recites a safety hood positioned at least at one of the entrance and exits of the frame. These features are not disclosed or suggested by any proper combination of BONNET and TORBET.

As acknowledged by the Examiner, BONNET lacks any hoods.

Moreover, while the Examiner has identified reference 26 in TORBET as the recited hoods, it is clear that the so-called hoods 26 are disclosed on TORBET as a housings "which serve merely to enclose the mechanism" M (see col. 2, lines 44-47).

Such disclosure if hardly suggestive of hoods having openings and being positioned at an entrance of each exit of the frame and/or of a safety hood positioned at least at one of the entrance and exits of the frame. Nor has the Examiner demonstrated otherwise.

Furthermore, even if one could properly characterize the housing 26 as a hood, the Examiner has failed to appreciate that TORBET does not disclose placing a hood 26 at an entrance and/or at one or more of the exits of a frame. Accordingly, the combination of BONNET and TORBET would not result in the invention recited in the above-noted claims.

In view of the actual disclosure of TORBET, Applicant submits that TORBET fails to provide the requisite motivation for modifying BONNET. While the Examiner has alleged that it would have been obvious to modify BONNET in view of the teachings of TORBET "in order to provide for a safety feature for the conveyor system", the Examiner has failed to identify any language in TORBET disclosing or suggesting that the housings 26 are usable as either hoods having openings and being positioned at an entrance of each exit of the frame and/or of a safety hood positioned at least at one of the entrance and exits of the frame. Thus, as the noted motivation cannot be found in the applied documents, it is apparent that the only motivation to modify BONNET in the manner necessary to obtain the invention recited in claims 12 and 17 is the Examiner's improper hindsight.

For the above-noted reasons, Applicant respectfully requests that the rejection of claims 12 and 17 over BONNET in view of TORBET be withdrawn.

Claims 13 and 27

Claims 13 and 27 were rejected under 35 U.S.C. §103(a) for being unpatentable over BONNET in view of TORBET and further in view of U. S. Patent No. 6,036,128 issued to CRAMER ("CRAMER"). This rejection is respectfully traversed.

Claim 13 depends from claim 12 and claim 27 depends from claim 1. As claims 12 and 1 are allowable for the reasons noted above, Applicant submits that claims 13 and 27 are allowable at least because they depend from claims 12 and 1.

Applicant submits that CRAMER does not cure the above-noted deficiencies of BONNET and TORBET. For example, CRAMER does not disclose or suggest a frame adapted for use with an existing conveyor system for transporting an item in an original direction, said frame including a frame entrance and a plurality of frame exits and at least one of the frame exits being perpendicular to the frame entrance as recited in claim 1. CRAMER is also silent with regard to hoods having openings and being positioned at an entrance of each exit of the frame as recited in claim 12. As none of the applied documents disclose or suggest at least these features, claims 13 and 27 are allowable at least because claims 1 and 12 are not rendered unpatentable over the asserted combination of documents.

For the above-noted reasons, Applicant respectfully requests that the rejection of claims 13 and 27 over BONNET in view of TORBET and CRAMER be withdrawn.

CONCLUSION

In view of the foregoing amendments and remarks, Applicant submits that all of the claims are patentably distinct from the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue. The Examiner is invited to contact the undersigned at the telephone number listed below, if needed. Applicant hereby makes a written conditional petition for extension of time, if required. Please charge any deficiencies in fees and credit any overpayment of fees to Deposit Account No. 19-0089.

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